

Group 05 - Specifications

General Hydraulic Specifications

Item	Measurement	Specification
Specifications:		
System	Type	Open Center
Steering Relief	Pressure	6 874 kPa (997 psi)
System Relief	Pressure	16 692 kPa (2421 psi)
Charge	Pressure	593 kPa (86 psi) maximum
Pump	Type	Trochoid and Open Center/Gear
Charge/Steering Pump Capacity (@ 2600 engine rpm)	Flow Rate	20.8 L/min (5.5 gal/min)
Implement Pump Capacity (@ 2600 engine rpm)	Flow Rate	18.8 L/min (5.0 gal/min)
Transaxle (sump)	Capacity	14.6 L (3.9 gal)
HST Pump:		
HST Pump	Type	PV Axial Piston
HST Motor	Type	MF Axial Piston
HST Pump and Motor	Size	23 cc (1.4 cu-in.)
Loop	Pressure	31 316 kPa (4542 psi)
Charge Pump to Engine (@ 2650 rpm: 2124 rpm)	Ratio	1:1
Charge Pump	Volume	8 cm ³ /rev (0.488 cu in./rev)
Implement Pump to Engine (@ 2650 rpm: 2124 rpm)	Ratio	1:0.903
Implement Pump	Volume	8 cm ³ /rev (0.488 cu in./rev)

Test and Adjustment Specifications

Item	Measurement	Specification
Specifications:		
System Relief Valve	Pressure	$16\,692 \pm 490$ kPa (170 ± 5 kgf/cm ²) (2421 ± 71 psi)
Rockshaft Safety Valve	Pressure	$19\,614 \pm 490$ kPa (200 ± 5 kgf/cm ²) (2845 ± 71 psi)
Rockshaft Relief Valve	Pressure	$16\,672 \pm 490$ kPa (170 ± 5 kgf/cm ²) (2418 ± 71 psi)
Steering Pressure Relief Valve	Pressure	$6\,853 + 490/-0$ kPa ($70 + 5/-0$ kgf/cm ²) ($994 + 71/-0$ psi)
Charge Pressure Relief Valve	Pressure	$786 + 196/-0$ kPa ($8 + 2/-0$ kgf/cm ²) ($114 + 28/-0$ psi)
PTO Relief Valve	Pressure	$2\,138 + 196/-98$ kPa ($21.8 + 2/-1$ kgf/cm ²) ($310 + 28/-14$ psi)
Forward Directional Control Valve	Pressure	$31\,316 \pm 1\,471$ kPa (320 ± 15 kgf/cm ²) (4542 ± 213 psi)
Reverse Directional Control Valve	Pressure	$31\,316 \pm 1\,471$ kPa (320 ± 15 kgf/cm ²) (4542 ± 213 psi)

Repair Specifications

Item	Measurement	Specification
Hydraulic Pump:		
Input Shaft Bearing	OD	17.93—18.06 mm (0.706—0.0711 in.)
Idler Gear Shaft Bearing	OD	17.93—18.06 mm (0.706—0.0711 in.)
Bushing	ID	18.00—18.06 mm (0.709—0.0711 in.)
Thrust Plate	Thickness	1.98—2.00 mm (0.078—0.079 in.)
Thrust Plate	Thickness	1.18—1.20 mm (0.046—0.047 in.)

Item	Measurement	Specification
Rockshaft:		
Shaft Large Bearing	OD	39.93 mm (1.572 in.)
Shaft Small Bearing	OD	34.94 mm (1.375 in.)
Large Bushing	ID	40.08 mm (1.578 in.)
Small Bushing	ID	35.13 mm (1.383 in.)
Stop Rod Extension From Body	Length	18 mm (0.709 in.)
Lift at 610 mm (24 in.) Behind Link Arms	Capacity	522 kg (1150 lb.)
Lift at Link Arms	Capacity	650 kg (1433 lb.)
Total Lift	Height	279 mm (10.98 in.)

Item	Measurement	Specification
Lift Arm:		
Lift Arm Angle Above Horizontal (maximum)	Angle	60°
Lift Arm Angle Below Horizontal	Angle	15°
Lift Arm Angle Stroke (Working)	Angle	75°
Lift Arm Angle (Maximum)	Angle	78°
Maximum Variance Between Lift Arms	Angle	± 2.5°

Torque Specifications

Item Measurement Specification

Hydraulic Pump:

Hydraulic Pump to Engine	Torque	26 N·m (230 lb.-in.)
Intake and Pressure Fittings Cap Screw	Torque	6 N·m (53 lb.-in.)
Pump Cover to Pump Body Cap Screws	Torque	15 N·m (133 lb.-in.)

Item Measurement Specification

Selective Control Valve (SCV):

Banjo Bolts	Torque	54 N·m (40 lb.-ft.)
Socket Head Cap Screws (SCV to Rockshaft)	Torque	16.7 N·m (148 lb.-in.)

Item Measurement Specification

Rockshaft:

Banjo Bolt (Hydraulic Pressure Line to Rockshaft)	Torque	67 N·m (50 lb.-ft.)
3-Point Hitch Center Link Bracket to Rockshaft Mounting Bolts	Torque	130 N·m (96 lb.-ft.)

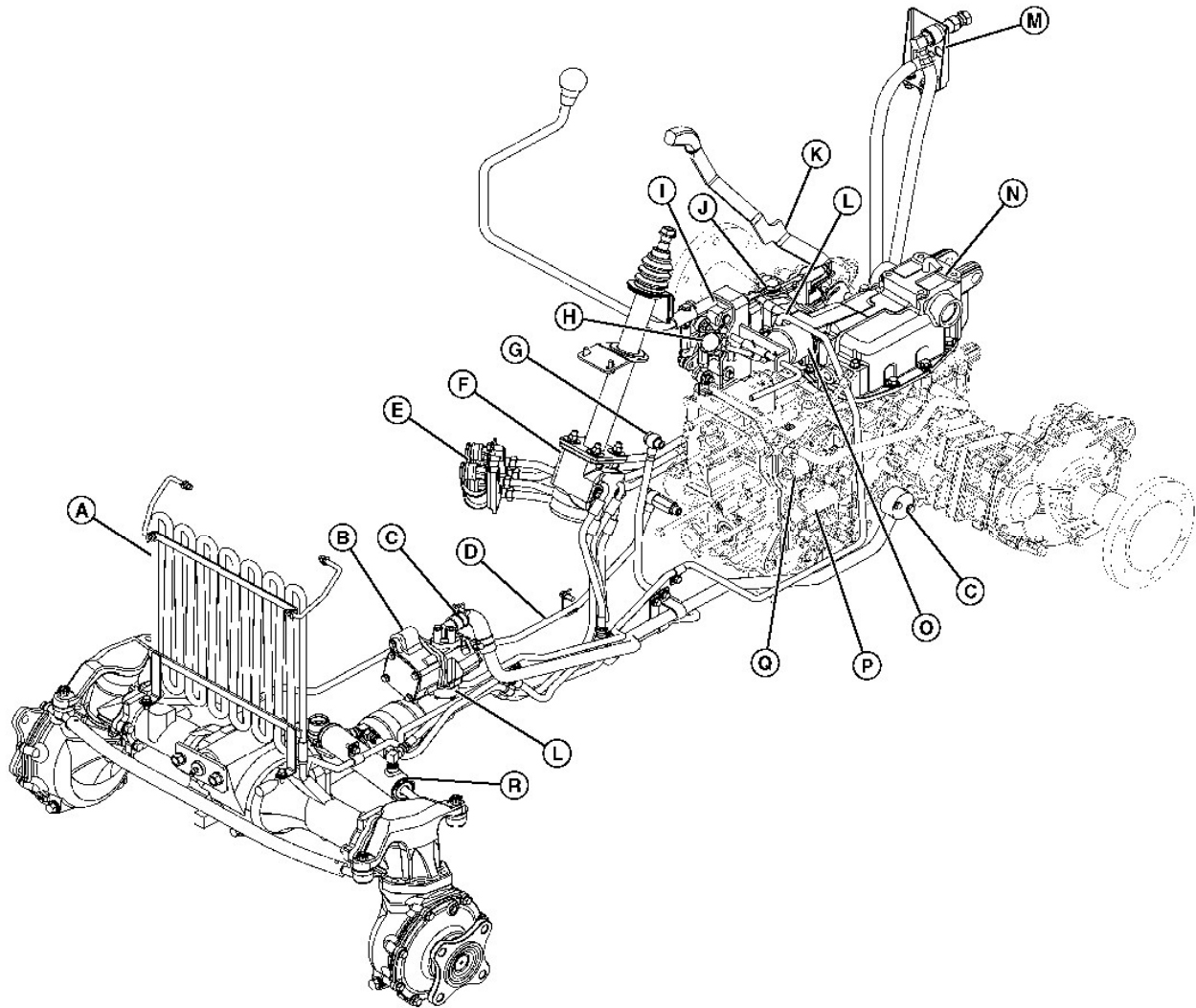
Service Equipment and Tools

→NOTE:

**Order tools according to information given in the SERVICEGARD[™] Catalog.
Some tools may be available from a local supplier.**

Group 10 - Component Locations

Hydraulic System



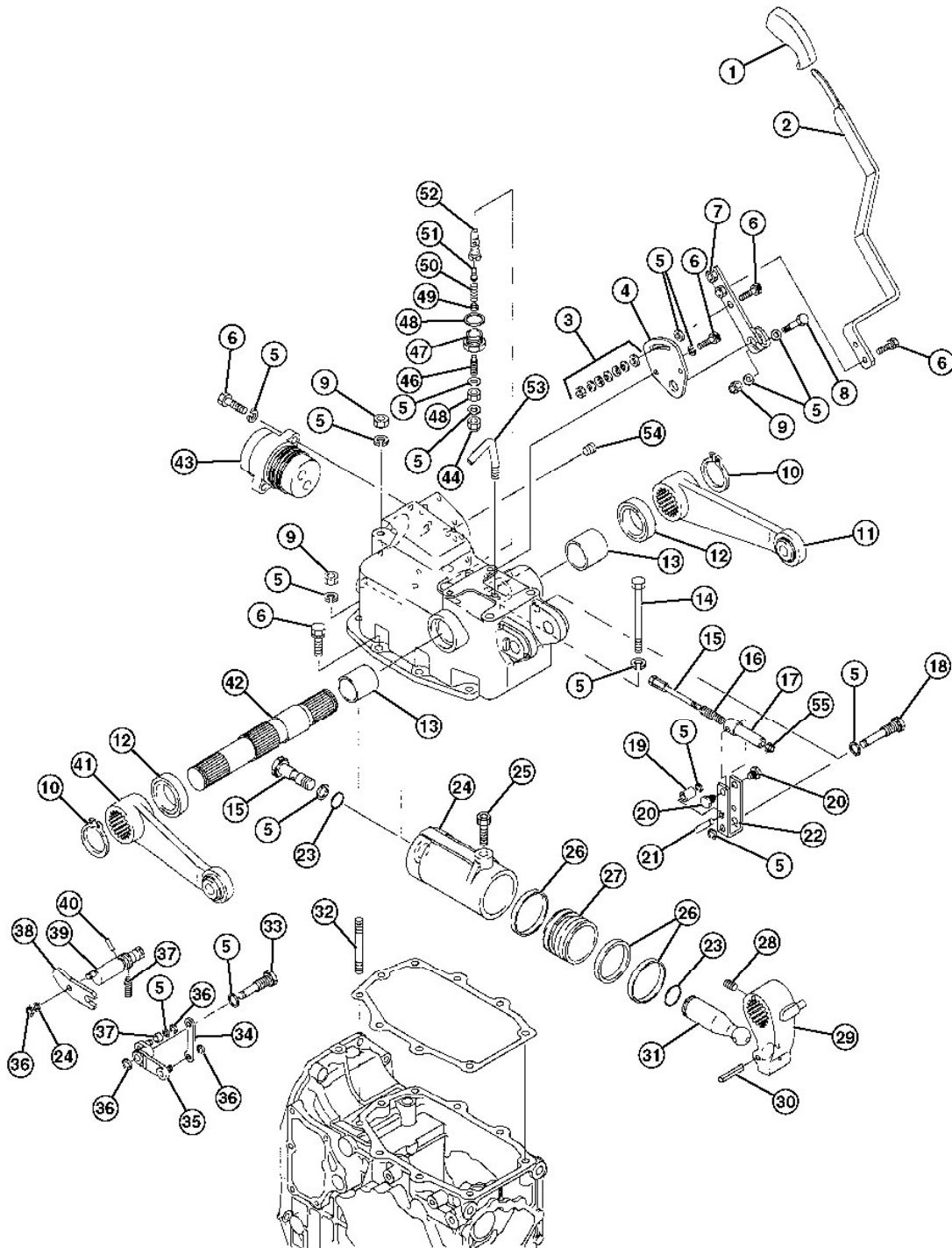
Hydraulic System Component Location

LEGEND:

- A Hydraulic Oil Cooler
- B Hydraulic Pump
- C Hydraulic Fluid Suction Line
- D Hydraulic Line (Return from Cooler)
- E Hydraulic Couplers
- F Steering Control Unit
- G Hydraulic Line (Pressure to SCU)
- H Rockshaft Rate of Drop Valve
- I Selective Control Valve Linkage
- J Selective Control Valve
- K Rockshaft Raise/Lower Lever

- L Hydraulic Fluid High Pressure Line
- M Auxiliary Hydraulic Couplers
- N Rockshaft
- O Rockshaft Control Valve Assembly
- P Hydraulic Suction Filter
- Q PTO Solenoid
- R Steering Cylinder

Rockshaft



Rockshaft Component Location

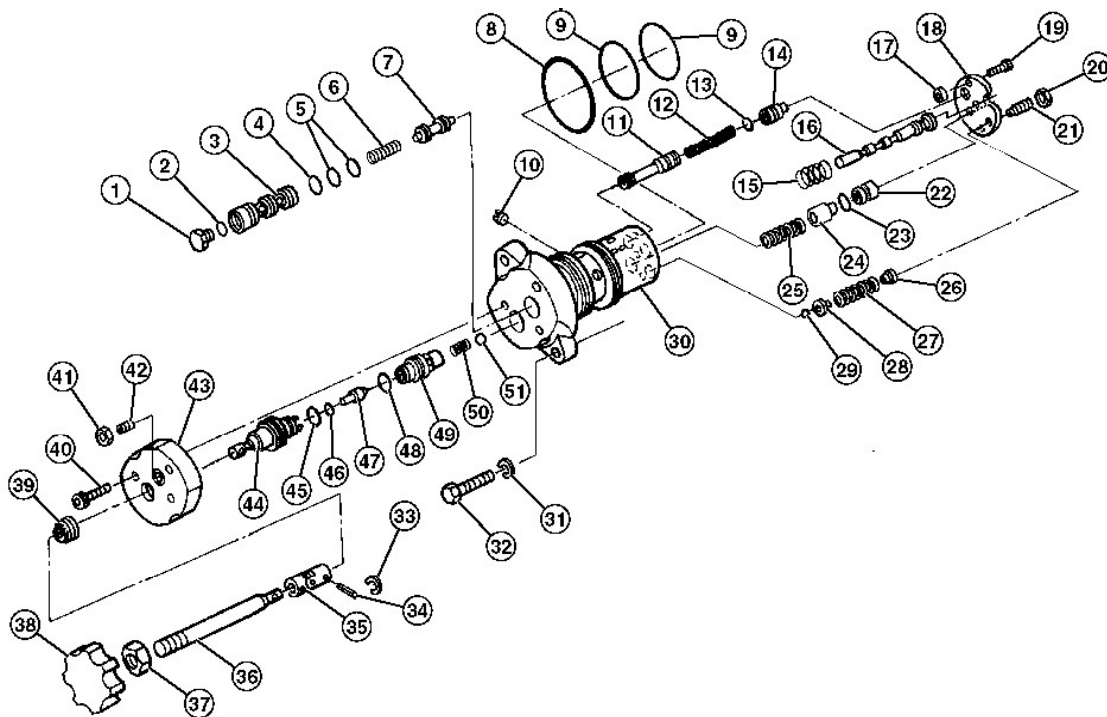
LEGEND:

- 1 Knob
- 2 Control Lever
- 3 Belleville Washers

- 4 Control Lever Bracket
- 5 Washer (15 used)
- 6 Bolt w/washer (4 used)
- 7 Control Lever Bracket
- 8 Cap Screw
- 8 Nut (3 used)
- 10 Snap Ring
- 11 RH Lift Arm
- 12 Bearing
- 13 Bushing
- 14 Bolt
- 15 Control Valve
- 16 Spring
- 17 Control Valve Seat
- 18 Pivot Pin
- 19 Spacer
- 20 Bolt
- 21 Pin
- 22 Bracket
- 23 O-Ring (2 used)
- 24 Cylinder
- 25 Hex Head Screw
- 26 Seal (3 used)
- 27 Piston
- 28 Bolt
- 29 Crank
- 30 Rolled Pin
- 31 Piston Rod
- 32 Stud
- 33 Pin
- 34 Link
- 35 Link
- 36 C-clip
- 37 Stud
- 38 Cam Plate
- 39 Shaft
- 40 Pin
- 41 LH Lift Arm
- 42 Rockshaft
- 43 Control Valve
- 44 Nylock Nut
- 45 Spacer
- 46 Stud
- 47 Plug
- 48 Gasket
- 49 Cap
- 50 Spring
- 51 Valve
- 52 Valve Seat
- 53 Vent Pipe
- 54 Plug

55 Nut

Rockshaft Control Valve—Component Location



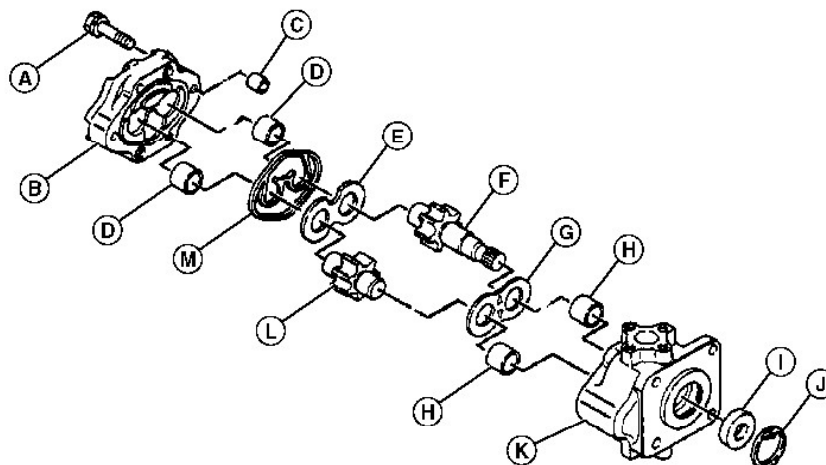
Rockshaft Control Valve—Component Location

LEGEND:

- 1 Plug
- 2 O-Ring
- 3 Valve Body
- 4 O-Ring
- 5 O-Rings
- 6 Spring
- 7 Spool
- 8 O-Ring
- 9 O-Ring
- 10 Orifice Plug
- 11 Spool
- 12 Spring
- 13 O-Ring
- 14 Plunger
- 15 Spring
- 16 Spool
- 17 Spacer (3 used)
- 18 End Plate
- 19 Socket Head Screw (3 used)
- 20 Lock Nut
- 21 Adjustment Screw
- 22 Valve Seat
- 23 O-Ring
- 24 Valve

- 25 Spring
- 26 Spring Keeper
- 27 Spring
- 28 Ball Seat
- 29 Ball
- 30 Speed Control Valve Body
- 31 Lock Washer
- 32 Cap Screw
- 33 Spring Clip
- 34 Pin
- 35 Universal Joint
- 36 Rod
- 37 Lock Nut
- 38 Knob
- 39 Boot
- 40 Socket Head Cap Screw
- 41 Lock Nut
- 42 Set Screw
- 43 Cover
- 44 Sped Control Valve
- 45 O-Ring
- 46 O-Ring
- 47 Needle Valve
- 48 O-Ring
- 49 Valve Body
- 50 Spring
- 51 Ball

Hydraulic Pump



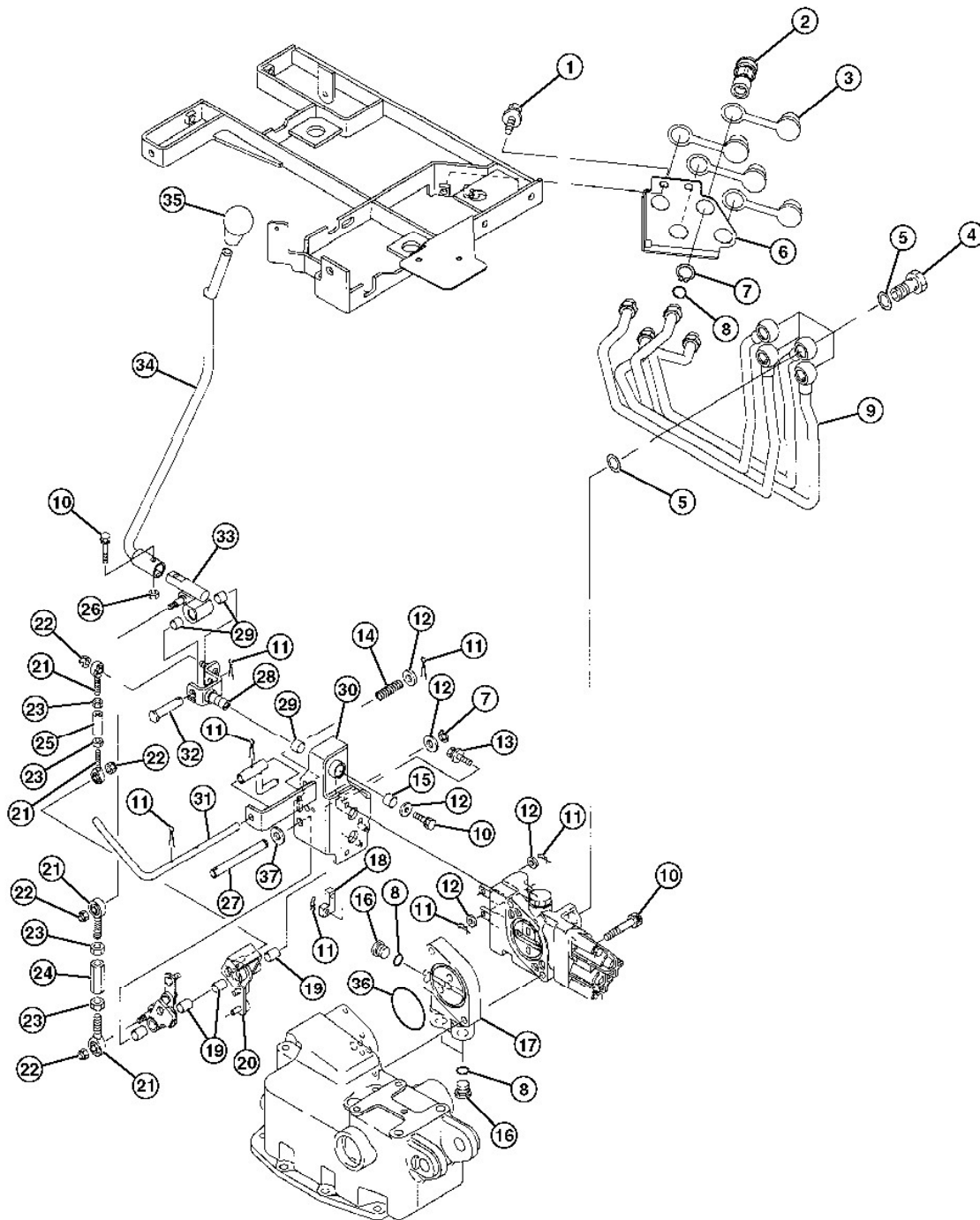
Hydraulic Pump Component Location

LEGEND:

- A Cap Screw
- B Cover
- C Locator

- D Bushing
- E Upper Bearing Plate
- F Driven Gear
- G Lower Bearing Plate
- H Bushing
- I Seal
- J Internal Snap Ring
- K Housing
- L Idler Gear
- M Formed O-Ring

Selective Control Valve Linkage—Component Location



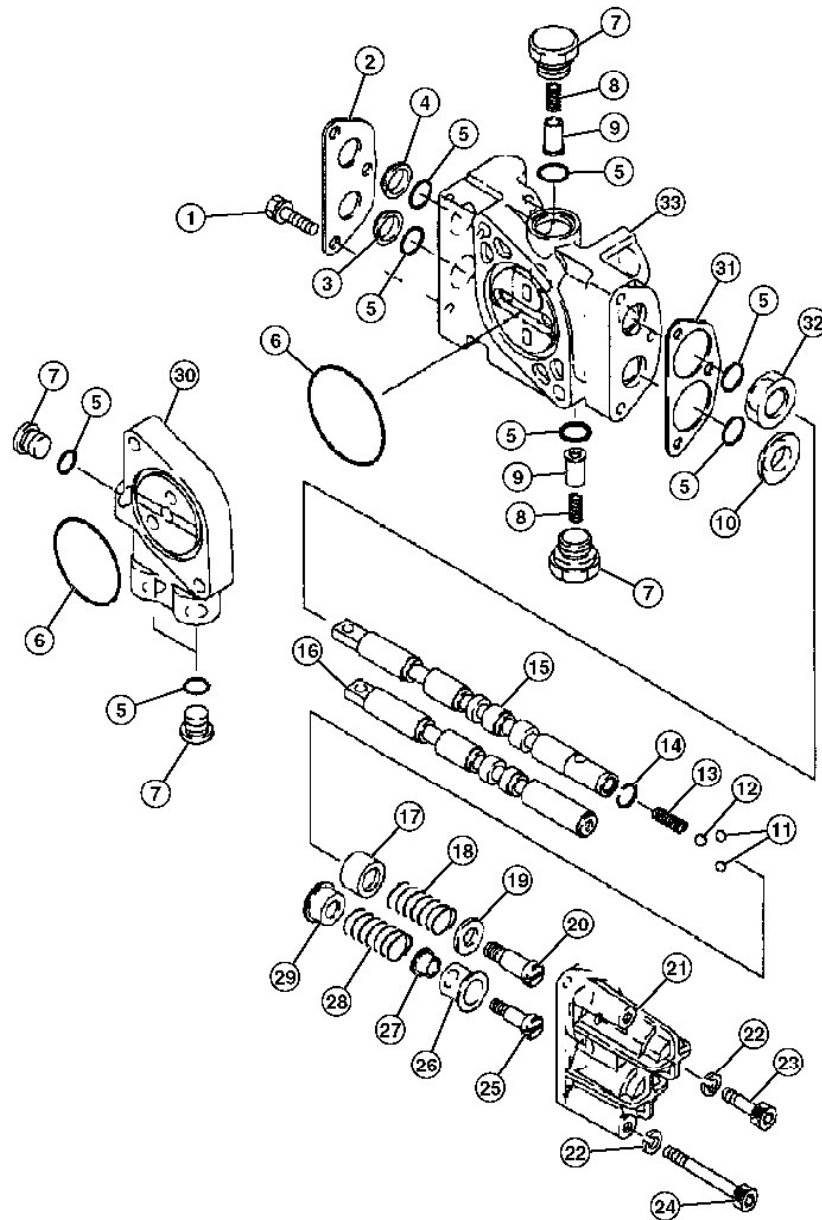
Selective Control Valve Linkage—Component Location

LEGEND:

- 1 Bolt w/Washer
- 2 Hydraulic Coupler
- 3 Dust Cap
- 4 Joint Bolt
- 5 Gasket (2 used)

- 6 Coupler Mount
- 7 Snap Ring
- 8 O-Ring (3 used)
- 9 SCV Pipe
- 10 Bolt (2 used)
- 11 Spring Pin (7 used)
- 12 Washer (5 used)
- 13 Bolt w/Washer
- 14 Spring
- 15 Bearing
- 16 Plug
- 17 Auxiliary Plate
- 18 Link
- 19 Bearing (2 used)
- 20 Cam Link
- 21 Rod End
- 22 Nylock Nut
- 23 Nut
- 24 Adjusting Nut
- 25 Rod
- 26 Nut
- 27 Link Cam Shaft
- 28 Lever
- 29 Bearing
- 30 Lever Bracket
- 31 Pin
- 32 Drilled Pin
- 33 Lever End
- 34 SCV Control Lever
- 35 Knob
- 36 O-Ring
- 37 Washer

Selective Control Valve Component Location



Selective Control Valve Component Location

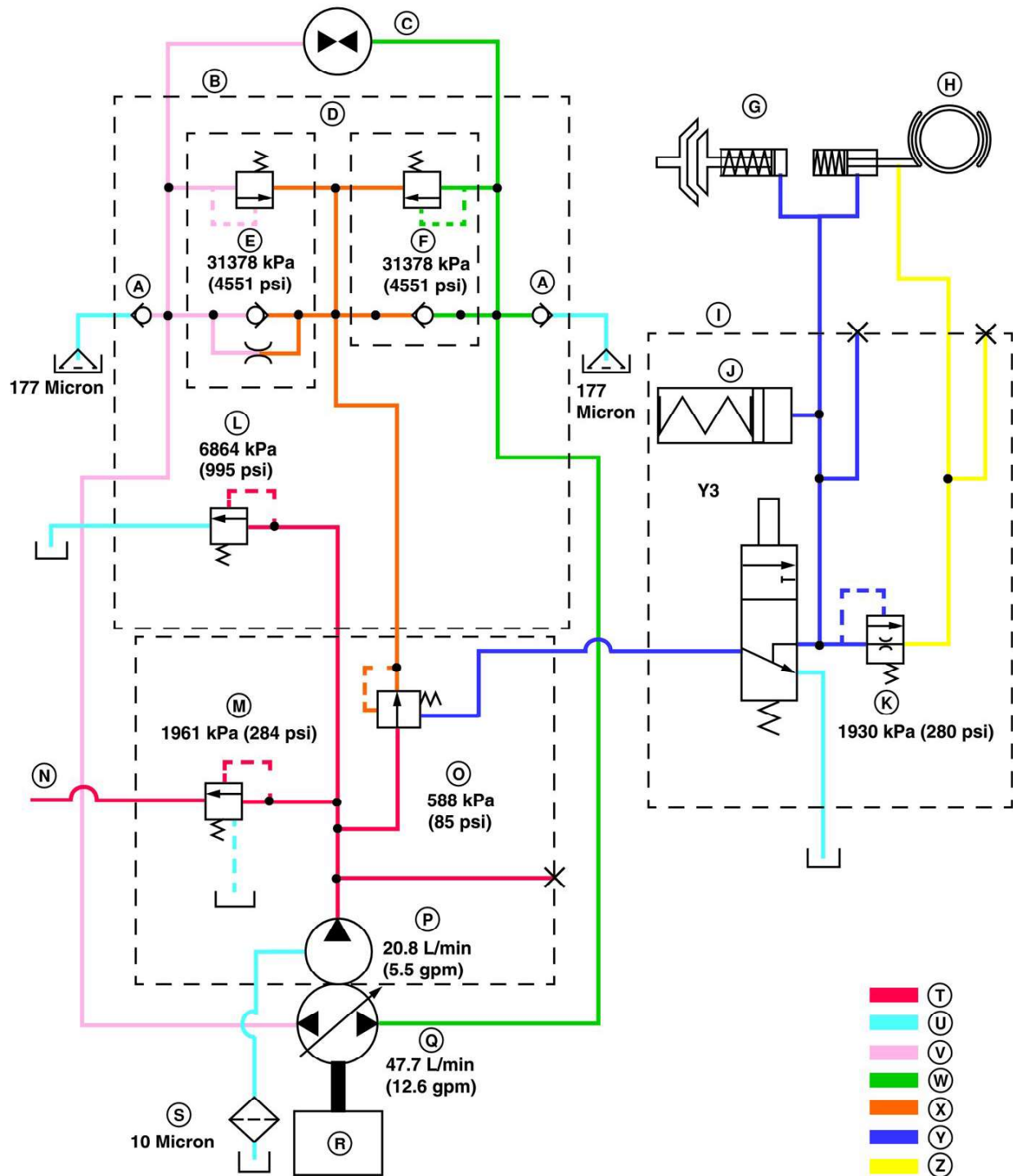
LEGEND:

- 1 Cap Screw (3 used)
- 2 Gasket
- 3 Seal
- 4 Seal
- 5 O-Ring (9 used)
- 6 O-Ring (2 used)
- 7 Plug (5 used)
- 8 Spring (2 used)

- 9 Detent (2 used)
- 10 Spacer
- 11 Detent Ball (4 used)
- 12 Ball (2 used)
- 13 Spring (2 used)
- 14 Lock Ring (2 used)
- 15 Spool
- 16 Spool
- 17 Spring Holder
- 18 Spring
- 19 Spring Holder
- 20 Cap Screw
- 21 Cover
- 22 Washer (3 used)
- 23 Cap Screw
- 24 Cap Screw (2 used)
- 25 Cap Screw
- 26 Spring Holder
- 27 Stop
- 28 Spring
- 29 Spring Holder
- 30 Housing
- 31 Gasket
- 32 Spacer
- 33 Housing

Group 15 - Hydraulic Schematics

Hydraulic Schematic

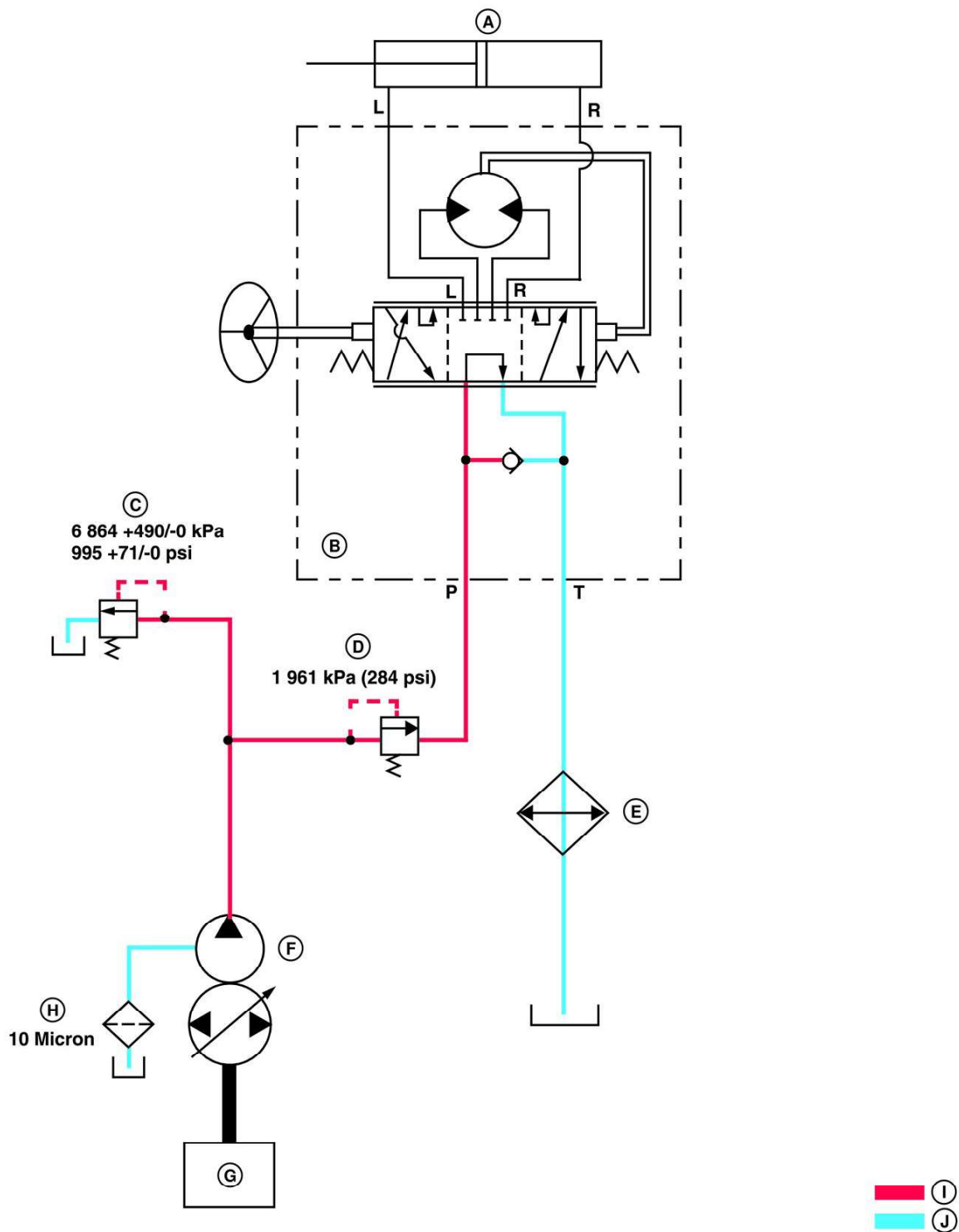


Hydraulic Schematic

LEGEND:

A	Anti-Cavitation Check Valve (2 used)
B	Valve Block
C	Hydrostatic Motor
D	Directional Control Valves (2 used)
E	Reverse
F	Forward
G	PTO Clutch
H	PTO Brake
I	Valve Plate
J	Accumulator
K	Relief Valve
L	System Relief Valve
M	Steering Pressure Control Valve
N	To Steering
O	Charge Pressure Regulator
P	Charge Pump
Q	Variable Displacement Pump
R	Engine
S	Filter
T	High Pressure Oil
U	Sump Oil
V	Reverse Loop Oil
W	Forward Loop Oil
X	Make-Up Oil
Y	PTO Clutch/Brake Pressure Oil
Z	Lubrication Oil
Y3	PTO Solenoid

Steering Schematic



Steering Schematic

LEGEND:

- A Steering Cylinder
- B Steering Control Unit (SCU)
- C System Relief Valve
- D Steering Pressure Control Valve
- E Oil Cooler
- F Charge Pump